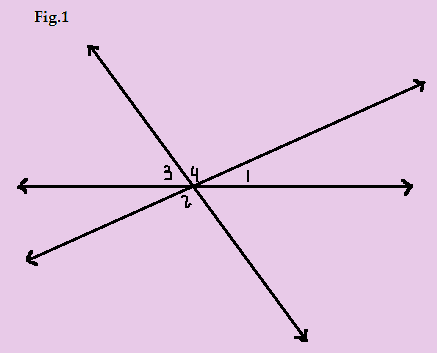
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**3.5 Triangle Angle Sum Application**



1. In figure 1, three lines intersect to form angles 1, 2, 3, and 4.

Explain why .

2. Multiple Choice: Two angles of a triangle have measures and . The third angle must have what measure?

a) b) c)

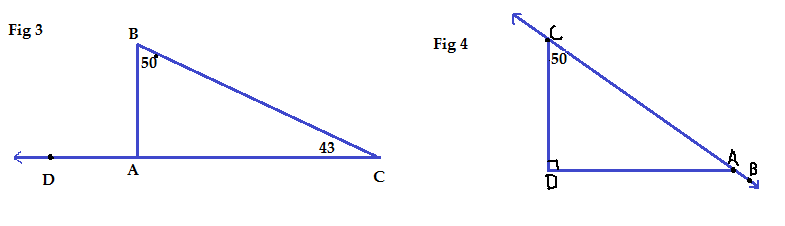


3. In fig. 2, lines PQ and RS intersect at point T. Find the measures of as

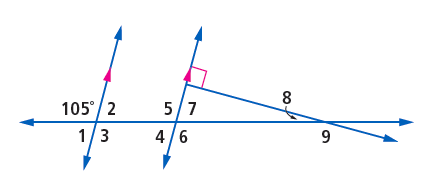
many angles in the figure as you can.

fig. 2

4. In figures 3 and 4, find the measure of :



5. Use the information given in figure 5.

 Explain the steps needed to find the Fig. 5

measure of Angle 9:

6. Explain your reasoning for each of the questions below:

a. How many right angles can a triangle have?

b. How many obtuse angles can a triangle have?

7. Two angles of a triangle have the given measures. Find the measure of the third angle.

a) 45, 45, \_\_\_\_\_ b) 2, 3, \_\_\_\_\_ c) 172, 5, \_\_\_\_\_\_

1. In triangle JOY, ∠O is a right angle. ∠Y = ∠J. What is the measure of ∠Y?
2. In triangle XYZ ∠X is 55°. ∠Y is twice as big as ∠X. Find the measure of ∠Z.